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Nomenclature changes in the "Entolomatoid fungi of western North America and Alaska" (Largent 1994)

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Abstract— Nomenclatural omissions and orthographic errors in my 1994 monograph are corrected. The three genera *Calliderma*, *Clitopiloides*, and *Fibropilus* were validly published in 1994 as stat. nov. based on infrageneric names, and their extraterritorial basionym type species are proposed here as *Ca. callidermum* comb. nov., *Cl. cyathus* comb. nov., and *F. fumosifolius* comb. nov. Names originally proposed as provisional are validated as *Leptonia cyanea* comb. nov., *L. cyanea* var. *occidentalis* var. nov., and *Inocephalus appressus* sp. nov. *Nolanea* names that were illegitimate later homonyms are proposed as *N. undatomarginata* comb. nov. and *N. papillatoides* comb. nov., based on published replacement names. The published validation of the invalid 1994 name "*Leptonia violacea*" is indicated, and seven orthographic epithet corrections are listed

Key words—*Entolomataceae*, taxonomy, classification

Introduction

In my publication on the entolomatoid fungi (Largent 1994), some errors in nomenclature and in typing were brought to my attention by several recent correspondences from Scott Redhead, Robert Fogel, Shaun Pennycook, Lorelei Norvell, Steve Trudell, and Buck McAdoo. The necessity of resolving these errors finally became apparent to me.

The nomenclatural omissions and orthographic errors rectified here involve six genera: *Calliderma*, *Clitopiloides*, *Fibropilus*, *Inocephalus*, *Leptonia*, *Nolanea*, and *Trichopilus*.

The multigeneric approach in the classification of the *Entolomataceae* is utilized in this paper as it was in Largent (1994) for the following reasons: a) the basionym for nearly every genus in the 1994 book is identical to the infrageneric basionyms in Romagnesi & Gilles (1979), Noordeloos (1992, 2004), or Noordeloos & Gates (2012); b) some exceptional agaricologists, such as C.H. Peck (1895), P.D. Orton (1991), and T.J. Baroni (2017) have recognized multigenera within the entolomatoid fungi; c) visually it is not difficult in the field to recognize the morphological groups that are represented by valid generic names; d) many, but not all, of these entolomatoid multigenera have a phylogenetic basis (Karstedt & al. 2019).

Materials and methods

Herbarium Codes were determined after consulting the Index Herbariorum web page (http://sweetgum.nybg.org/science/ih); the correct code is listed between parentheses and the incorrect code as found in Largent (1994) is listed with the code crossed out between quotation marks. The codes for the following herbaria may have errors: New York Botanic Garden Steere Herbarium (NY) "~~NYBG~~", Humboldt State University Fungal Herbarium (HSC) "~~HSU~~", San Francisco State H.D. Thiers Herbarium (SFSU) "~~SFSC~~", Virginia Polytechnic Institute and State University (VPI) "~~VPISU~~", and the University of Washington in Seattle (WTU) "~~WASH~~".

After 2002, all collection numbers designated as either DLL, dll, or (rarely) L in Largent (1994) have been conserved in the New York Botanic Garden Steere Herbarium (NY).

Taxonomy

Basionym types not transferred to new genera

The three genera *Calliderma*, *Clitopiloides*, and *Fibropilus* were validly published in 1994 as stat. nov. based on infrageneric names; their basionym type species were extraterritorial (in the context of the 1994 monograph) and were therefore not recombined in the new genera. The valid publication of the genera is presented again here together with new combinations of their type species.

Calliderma (Romagn.) Largent, Entolomatoid fungi of the western United States and Alaska: 31 (1994).

IF 27566

≡ *Rhodophyllus* section *Calliderma* Romagn., Bull. Mens. Soc. Linn., Lyon 43: 329 (1974).

Type: *Rhodophyllus callidermus* Romagn. [≡ *Entoloma callidermum* (Romagn.) Noordel. & Co-David; ≡ *Calliderma callidermum* (Romagn.) Largent].

Calliderma callidermum (Romagn.) Largent, **comb. nov.**

MB 833252

≡ *Rhodophyllus callidermus* Romagn., Bull. Jard. bot. État Brux. 26: 171 (1956).

≡ *Entoloma callidermum* (Romagn.) Noordel. & Co-David, in Co-David, Langeveld & Noordeloos, Persoonia 23: 165 (2009).

Clitopiloides (Romagn.) Largent [as "*Clitopiloidea*"], Entolomatoid fungi of the western United States and Alaska: 30 (1994).

MB 838125

≡ *Rhodophyllus* sect. *Clitopiloides* Romagn., Fondem. Taxinom. Rhodophylle: 55. (1978) [≡ Beih. Nova Hedwigia 59: 71. (1979)]

TYPE: *Rhodophyllus cyathus* Romagn. & Gilles [≡ *Entoloma cyathus* (Romagn. & Gilles) Noordel. & Co-David; ≡ *Clitopiloides cyathus* (Romagn. & Gilles) Largent].

Clitopiloides costata (Fr.) Largent, **comb. nov.**

MB 838130

≡ *Agaricus pascuus* β *costatus* Fr., Syst. Mycol. 1: 206 (1821)

≡ *Entoloma costatum* (Fr.) P. Kumm., Führ. Pilzk.: 98 (1871).

Clitopiloides cyathus (Romagn. & Gilles) Largent, **comb. nov.**

MB 838131

≡ *Rhodophyllus cyathus* Romagn. & Gilles, Beih. Nova Hedwigia 59: 617 (1979).

≡ *Entoloma cyathus* (Romagn. & Gilles.) Noordel. & Co-David, Persoonia 23: 167 (2009).

COMMENTS: Although *Clitopiloides* was validly published in Largent (1994), the protologue contained several correctable errors: (1) the name "*Clitopiloidea*" required correction to *Clitopiloides*, to correspond with Romagnesi's basionym epithet (the two orthographies are synonymous but have different derivations); (2) the basionym reference was ambiguous, because the Romagnesi (1978) preprint extract from Beihefte zur Nova Hedwigia 59 was independently paginated, and p. 55 of the extract equates with p. 71 of the full volume (Romagnesi & Gilles 1979); (3) the generic type was erroneously stated to be "*Entoloma costatum*" (an error introduced by Noordeloos 1992: 212), whereas the correct type remains that designated for the basionym by Romagnesi (1978).

Fibropilus (Noordel.) Largent, Entolomatoid fungi of the western United States and Alaska: 32 (1994)

IF 27588

≡ *Entoloma* subgenus *Fibropilus* Noordel., *Entoloma* in North America Cryptogamic Studies 2: 12 (1988).

TYPE: ≡ *Entoloma fumosifolium* Hesler [≡ *Fibropilus fumosifolius* (Hesler) Largent]

Fibropilus fumosifolius (Hesler) Largent, **comb. nov.**

MB 833269

≡ *Entoloma fumosifolium* Hesler, Beih. Nova Hedwigia 23: 132 (1967).

Nomenclatural novelties

Inocephalus appressus Largent, **sp. nov.**

MB 833283

"*Inocephalus appressus*" Largent, Entolomatoid fungi of the western United States and Alaska: 400 (1994), nom. inval. [ICN (Shenzhen) Art. 40.7].

Type: USA, Washington State, Pierce County, Longmire Campground, scattered to gregarious in needle humus alongside a stream, 10 October 1966, DLL 1830 (**Holotype**, NY).

Etymology—from Latin *appressus* meaning closely flattened down (= adpressed/ appressed fibrillose pileus surface.

Description & Illustrations: Largent (1994: 400; Figs. p. 401; Plate p. 484).

Leptonia cyanea (Sacc.) Largent, **comb. nov.**

MB 833270

≡ *Agaricus cyaneus* Peck, Bull. Buffalo Soc. Nat. Sci. 1(2): 49. 1873, nom. illegit. [non Bull. 1784].

≡ *Entoloma cyaneum* Sacc., Syll. Fung. 5: 692. 1887.

"*Leptonia cyanea*" Mazzer, in Largent, Biblioth. Mycol. 55: 66. 1977, nom. inval. [ICN (Shenzhen) Art. 36.1(a)].

Comments: *Agaricus cyaneus* Peck was published in 1873 as a valid, but illegitimate later homonym of *A. cyaneus* Bull. It was transferred to *Entoloma* by Saccardo as *E. cyaneum* nom. nov., and consequently, *Entoloma cyaneum* (Murrill) Hesler 1967 is an illegitimate later homonym. Following ICN (Shenzhen) Art. 11.4, the earliest available legitimate name for this species, *Entoloma cyaneum* Sacc., must be used as the basis of the correct name.

Leptonia cyanea var. ***occidentalis*** Largent, **var. nov.**

MB 833311

"*Leptonia cyanea* var. *occidentalis*" Mazzer, in Largent, Biblioth. Mycol. 55: 68. 1977, nom. inval. [ICN (Shenzhen) Art. 36.1(a)].

Type: USA, California State, Humboldt County, Big Hill Road east from Hoopa, scattered on conifer logs and rotting wood, October 26, 1990, DLL 9018 (**Holotype**, NY).

Etymology—From the Latin *occidentalis* meaning west, western.

Description & Illustrations: Largent (1994: 36–37; Figs. p. 37; Plate p. 469).

Nolanea papillatoides (Mešić & Tkalčec) Largent, **comb. nov.**

MB 833314

≡ *Nolanea pseudopapillata* Largent, Entolomatoid fungi of the western United States and Alaska: 243 (1994), nom. illegit. [non Pegler1983].

≡ *Entoloma papillatoides* Mešić & Tkalčec, in Mešić, Tkalčec, Kušan & Matočec, Phytotaxa 289(3): 298 (2016).

Nolanea undatomarginata (Mešić & Tkalčec) Largent, **comb. nov.**

MB 833271

≡ *Nolanea undulata* Largent, Entolomatoid fungi of the western United States and Alaska: 232 (1994), nom. illegit [non Velen. 1921].

≡ *Entoloma undatomarginatum* Mešić & Tkalčec, in Mešić, Tkalčec, Kušan & Matočec, Phytotaxa 289(3): 299 (2016).

Invalid name correction

The citation listed below should replace the invalid name listed in Largent (1994).

Leptonia violacea (Kauffman) Largent ex Redhead, Mushroom, The Journal of Wild Mushrooming 13(4): 31 (1995)

≡ *Nolanea coelestina* var. *violacea* Kauffman, Report Mich. Acad. Sci. 10: 67 (1908).

≡ *Rhodophyllus coelestinus* var. *violaceus* (Kauffman) A.H. Sm., Mushrooms in their natural habitats: 449 (1949).

≡ *Entoloma kauffmanii* Malloch, Fleshy fungi (*Basidiomycota*) of the Atlantic Maritime Ecozone: 120 (2010).

"*Leptonia violacea*" (Kauffman) Largent, Entolomatoid fungi of the western United States and Alaska: 46 (1994), nom. inval. [ICN (Shenzhen) Art. 41.5, incomplete basionym reference].

Orthographic variant corrections

The citations listed below should replace those on the indicated pages in Largent (1994). The name in quotation marks is the orthographic variant.

Calliderma indigoferum (Ellis) Largent [as "*indigofera*" in Entolomatoid fungi of the western United States and Alaska: 31 (1994)].

Leptonia acutoumbonata Largent [as "*acuto-umbonata*" in Entolomatoid fungi of the western United States and Alaska: 142 (1994)].

Leptonia chalybea (Pers.) P. Kumm. [as "*chalybaea*"] Führ. Pilzk.: 96 (1871) and in Entolomatoid fungi of the western United States and Alaska: 120 (1994)].

Leptonia chalybea var. ***squamulosipes*** Largent [as "*chalybaea*" in Entolomatoid fungi of the western United States and Alaska: 120 (1994)].

Leptonia roseicinnamomea Largent [as "*roseicinnamonea*" in both Northwest Sci. 48: 59 (1974) and Entolomatoid fungi of the western United States and Alaska: 85 (1994)].

Nolanea brunneolamellata Largent [as "*brunneo-lamellata*" in Entolomatoid fungi of the western United States and Alaska: 249 (1994)].

Nolanea substrictior Largent [as "*substrictia*" in Entolomatoid fungi of the western United States and Alaska: 274 (1994)].

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